



**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2021-1002; Project Identifier AD-2021-00332-R; Amendment 39-21926; AD 2022-03-09]**

**RIN 2120-AA64**

**Airworthiness Directives; Sikorsky Aircraft Corporation Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain Sikorsky Aircraft Corporation Model S-76D helicopters. This AD was prompted by reports that certain Thales global positioning system (GPS) satellite based augmentation system (SBAS) receivers provided, under certain conditions, erroneous outputs on aircraft positions. This AD requires replacing affected GPS receivers and prohibits installing those GPS receivers. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this final rule, contact your local Sikorsky Field Representative or Sikorsky's Service Engineering Group at Sikorsky Aircraft Corporation, Mailstop K100, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-946-4337 (1-800-Winged-S); email [wcs\\_cust\\_service\\_eng.gr-sik@lmco.com](mailto:wcs_cust_service_eng.gr-sik@lmco.com). Operators may also log on to the Sikorsky 360 website at <https://www.sikorsky360.com>. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177.

For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-1002.

### **Examining the AD Docket**

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-1002; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Nicholas Rediess, Aviation Safety Engineer, Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7159; fax: (781) 238-7199; email: 9-AVS-AIR-BACO-COS@faa.gov.

### **SUPPLEMENTARY INFORMATION:**

#### **Background**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to Sikorsky Aircraft Corporation Model S-76D helicopters with a GPS TopStar 200 LPV receiver part number (P/N) C17149HA01 installed. The NPRM published in the *Federal Register* on November 16, 2021 (86 FR 63322). The NPRM was prompted by reports that certain Thales GPS SBAS receivers provided, under certain conditions, erroneous outputs on aircraft positions. The unsafe condition, if not addressed, could result in controlled flight into terrain and loss of control of the helicopter. Therefore, the NPRM proposed to require replacing each affected GPS receiver and prohibit installing an affected GPS receiver on any helicopter. The FAA is issuing this AD to address the unsafe condition on these products.

The European Aviation Safety Agency (now European Union Aviation Safety Agency) (EASA), which is the Technical Agent for the Member States of the European Union, issued EASA AD 2019-0004, dated January 11, 2019, and corrected on January 17, 2019 (EASA AD 2019-0004), to correct an unsafe condition for Thales AVS France

SAS (Thales), formerly Thales Avionics SAS, GPS/SBAS receivers, Topstar 200 LPV, P/N C17149HA01 and C17149JA02, using SBAS, which are known to be installed on, but not limited to, certain Model ATR 42-500 and ATR 72-212A aeroplanes and Sikorsky Model S-76D helicopters. EASA advises of reports indicating that Thales GPS SBAS receivers provided, under certain conditions, erroneous outputs on aircraft positions. EASA AD 2019-0004 requires actions to prevent compromise of the safety margins when the receiver is used for Localizer Performance with Vertical guidance (LPV) and/or RNP-AR (Required Navigation Performance—Authorization Required) operations. Following the issuance of EASA AD 2019-0004, the FAA issued AD 2020-08-02, Amendment 39-21108 (85 FR 20586, April 14, 2020), to address the unsafe condition on these products.

After the issuance of EASA AD 2019-0004, EASA issued related EASA AD 2021-0013, dated January 13, 2021, in response to a software update that was developed to ensure correct navigational performance of certain Thales GPS SBAS receivers installed on ATR-GIE Avions de Transport Régional, formerly EADS ATR—Alenia, Aerospatiale Matra ATR—ALENIA, Aerospatiale—Alenia, Aerospatiale—Aeritalia, Model ATR 42-500 and ATR 72-212A aeroplanes. The FAA subsequently issued AD 2021-19-13, Amendment 39-21731 (86 FR 54801, October 5, 2021), to address the unsafe condition on these products.

## **Discussion of Final Airworthiness Directive**

### **Comments**

The FAA received no comments on the NPRM or on the determination of the costs.

### **Conclusion**

The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. However, the FAA discovered an error in the U.S. fleet costs. The NPRM inadvertently stated the costs as \$336,820; this final rule corrects those costs, which are \$168,410 for the U.S. fleet. Except for the change to the U.S. fleet costs and minor editorial changes, this AD is adopted as proposed in the NPRM.

### **Related Service Information under 1 CFR part 51**

The FAA reviewed Sikorsky S-76D Helicopter Service Bulletin SB 76-017, Basic Issue, dated May 11, 2021 (SB 76-017). SB 76-017 specifies procedures for removing, updating, and installing GPS TopStar 200 LPV receivers. SB 76-017 also provides instructions for sending the GPS receiver(s) to Thales Authorized Repair Stations for the software update.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

### **Costs of Compliance**

The FAA estimates that this AD affects 22 helicopters of U.S. Registry and that operators may incur the following costs in order to comply with this AD. Labor costs are estimated at \$85 per work-hour.

Replacing two GPS receivers takes about 3 work-hours and parts cost about \$7,400, for an estimated cost of \$7,655 per helicopter and \$168,410 for the U.S. fleet.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator.

Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **The Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

**2022-03-09 Sikorsky Aircraft Corporation:** Amendment 39-21926; Docket No. FAA-2021-1002; Project Identifier AD-2021-00332-R.

**(a) Effective Date**

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

This AD affects AD 2020-08-02, Amendment 39-21108 (85 FR 20586, April 14, 2020) (AD 2020-08-02).

**(c) Applicability**

This AD applies to Sikorsky Aircraft Corporation Model S-76D helicopters, certificated in any category, with Thales Global Positioning System (GPS) TopStar 200 LPV receiver part number (P/N) C17149HA01 installed.

**(d) Subject**

Joint Aircraft System Component (JASC) Code: 3457, Global Positioning System.

**(e) Unsafe Condition**

This AD was prompted by reports that certain Thales GPS satellite based augmentation system (SBAS) receivers provided, under certain conditions, erroneous outputs on aircraft positions. The unsafe condition, if not addressed, could result in controlled flight into terrain and loss of control of the helicopter.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Required Actions**

(1) Within 130 hours time-in-service after the effective date of this AD, replace each affected GPS receiver identified in paragraph (c) of this AD with GPS receiver P/N C17149RA01 in accordance with the Accomplishment Instructions, paragraphs A., C., and D., of Sikorsky S-76D Helicopter Service Bulletin SB 76-017, Basic Issue, dated May 11, 2021.

(2) As of the effective date of this AD, do not install a GPS receiver identified in

paragraph (c) of this AD on any helicopter.

(3) Accomplishing paragraph (g)(1) of this AD terminates the requirements of AD 2020-08-02.

**(h) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Boston ACO Branch, Compliance & Airworthiness Division, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (i) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(i) Related Information**

For more information about this AD, contact Nicholas Rediess, Aviation Safety Engineer, Boston ACO Branch, Compliance & Airworthiness Division, FAA, 1200 District Avenue, Burlington, MA 01803; telephone (781) 238-7159; email: 9-AVS-AIR-BACO-COS@faa.gov.

**(j) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Sikorsky S-76D Helicopter Service Bulletin SB 76-017, Basic Issue, dated May 11, 2021.

(ii) [Reserved]

(3) For Sikorsky Aircraft Corporation service information identified in this AD, contact your local Sikorsky Field Representative or Sikorsky's Service Engineering Group at Sikorsky Aircraft Corporation, Mailstop K100, 124 Quarry Road, Trumbull, CT

06611; telephone 1-800-946-4337 (1-800-Winged-S); email [wcs\\_cust\\_service\\_eng.gr-sik@lmco.com](mailto:wcs_cust_service_eng.gr-sik@lmco.com). Operators may also log on to the Sikorsky 360 website at <https://www.sikorsky360.com>.

(4) You may view this service information at FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov), or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on January 20, 2022.

Ross Landes, Deputy Director for Regulatory Operations,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

[FR Doc. 2022-02745 Filed: 2/9/2022 8:45 am; Publication Date: 2/10/2022]